desirable to maintain white as the ground, or, at any rate, to retain a great deal of white—for without white it is difficult to indicate with sufficient clearness the main lines as distinct from those which have no more serious purpose than ornamentation—that is to say, to distinguish the lines which affect proportion from those which are a part of the detail. This rule does not apply with the same force on curved surfaces, where less artificial suggestion of form is demanded, and where, moreover, gold can be used much more freely should the circumstances admit of it.

The staircase is another important feature in every house, and since its decorative treatment often presents difficulties, it seems desirable to consider how they may best be met.

Where it is practicable—and it is in some staircases—it is very desirable to make a broad distinction of coloring between the lower and upper stories. inserting a sort of string course at the level of, perhaps, the first floor. This at once gives breadth and stability of appearance, and helps to counteract that effect of perpetual treadmill which is so unpleasant in mounting an ordinary staircase. Where it is not possible satisfactorily to effect this marked horizontal division, it is possible, and frequently advantageous, to adopt such a design of decoration or paper hanging as admits of the repetition of horizontal lines at brief intervals. This was the one good feature of the old marbled paper in blocks, and which still leads people to assert that a staircase looks larger with a marbled paper, the sense of width being in fact due to the horizontal joints, not to the figure of the marble. Designers who have perceived this fact now produce patterns arranged on the same block system, and suitable for narrow staircases.

Where an open wall staircase exists, with stair to the first or second floors only, and open wall above, much may be done with moderate use of color in cornice and frieze to give a value to the whole. In such cases there should certainly be a well defined frieze or string course at the level at which the stairs cease.

The soffits of the stairs may often be advantageously pannelled out with mouldings, but where they are the plain soffits of stone stairs this is not very readily managed, and one must then have recourse to color. A very simple use of even color lines will often be of considerable value. Again, much may be done to relieve the meanness and monotony of a staircase by making a sort of vestibule or separate feature of one of the landings; and concentrating there your richer coloring and ornamentation instead of frittering them away in driblets over the whole.

The use of stained glass in one form or another has become so frequent for domestic purposes that it is no longer necessary to advocate it. Perhaps it is rather necessary to ask for discrimination in its uses. It does not accord well with light tints of pure tone in the decoration, but with low tones, whether light or dark, and with deep rich tones of color it may usually be adjusted harmoniously. There are, of course, some restrictions connected with style which it is well to observe, because no mind trained in the history of art can altogether shake off those impressions of fitness or incongruity which are the direct result of such training.

I have in former lectures spoken at length on the use of gilding in decoration, but cannot altogether pass it by here. Properly used it is most valuable, serving, as it does, several distinct purposes. It is valuable for explaining form, for lighting up surface ornament, for separating colors, and for the mellowing effect it has on all coloring. It gives the decorator a ready means of "emphasis," serving to carry the eye to the right points and along the right lines, even in the shadowed parts of the work, or where the coloring is deep enough to made emphasis of color alone difficult. It should be borne in mind that gilding, to be successful, must be used boldly and with very defined purpose, because in some lights you will see the gilding when you cannot distinguish colors. Timid gilding, in meagre lines or detached patches, is always avoided. It has the same sort of effect as cheap finery, and is destructive of repose. Gilding, properly used, even where very freely used, never looks tawdy or vulgar; and where you find an interior spoken of as vulgar or tawdry from over gilding, you may depend upon it that it is less the quantity of gold than its being in the wrong places which has again produced the effect.

Reverting to the question of "emphasis" in decoration, whether by gilding or otherwise, I may say that nothing is more essential to the success of any decoration, and when properly used, will very materially add to the effect.

THE coloring of an artistic and inexpensive parlor is decidedly happy. Above a dado of reddish and gold leather paper there is a light bluish wall filling, leading up to a primrose frieze and a panelled rose-tinted ceiling. Walls decorated in this manner would stand as a certificate for an artist in the matter of decoration.

HOW TAPESTRY IS DYED AT THE GOBELINS.

THE Gobelins has all along been noted for the excellence of its dyes. The study of these as applied to silk and wool has there been pursued systematically for a long series of years, eliminating to a great extent all uncertainty of results as to hues and tones. The reproduction with correctness on tapestry of any painting requires the employment of an immense number of shades of color, and with all the formulas provided the obtaining of the precise hues and tones desired is largely dependent on the skilful manipulation of the dyer, who, in forming his baths, exercises much individual discretion instead of solely relying on weights and measures. It is impossible to give the precise number of pounds and ounces of dye wares used in most cases, the relative proportions of these to one another differing according to the respective qualities of the material to be dyed and the circumstances of the case. Both the silk and wool dyed at the Gobelins are in skeins and hanks. Aware of the value of the general formulas now in use in the Gobelins, we have obtained through an individual admitted into the manufactory by order of the French government, for the purpose of ascertaining and tabulating these, and who was permitted unrestrictedly to pursue his investigations, the following methods of treatment:

We have to premise that bruniture, so often referred to in the mixtures, consists of one pail of sumach, six pails of logwood, one and a half pounds of galls, which are boiled together for two or three hours, over a slackened fire, cold water being then added, when the liquor is run off into a stone vessel. When cold, twelve pounds of sulphate of iron are added.

The Indian carmine referred to consists of the extract of one pound of indigo and three and a half pounds of sulphuric acid.

The tin solution mentioned is made by adding to eight pounds of nitric acid, one pound of muriate of ammonia, and gradually one pound of pure tin in fine shavings and two pounds of water.

No alum and tartar mordant is used for blue. Tartar is only used for crimson. Alum is the only mordant for silk.

Weld or madder color is always boiled in hard water, as this renders it clearer.

In the dye bath light shades are first given, the bath for the purpose being as cool as possible.

Archil is employed for giving a degree of freshness and clearness to color.

For scouring wool four pounds of lime to twenty pounds of soap are used, these being dissolved in water.

For the aluming of silk twelve ounces of alum are added to each four pounds of water; after twenty-four hours four ounces more of alum are added. The whole remains about twenty-four hours at the temperature of the atmosphere in a dark cellar.

Indigo is dissolved in concentrated sulphuric acid. Some wool is passed through the decoction to remove the red or brown particles of indigo.

The alum and tartar mordant for wool consists of six pounds of alum and one and a half pounds of tartar to thirty pounds of wool.

Light Flesh Color to Dark Crimson on Wool.—Alum and tartar mordant. Bath of cochineal, to which is added decoction of logwood, sumach, weld and sulphate of iron in suitable proportions.

Marone and Savoyard to Black on Alumed Silk.—The bath is formed by boiling together for an hour or two weld, madder and a little logwood and fustic, sulphate of iron is then added. To obtain the darker shades a further solution of logwood is made, and the silk is passed through a solution of sulphate of iron and some of the bruniture.

Pink on Alumed Silk.—Bath formed of solution of tartar and cochineal, about four ounces of cochineal to one pound of silk. About a quarter of the copper is filled with water, and the cochineal being added, it is heated half brown. The decoction is now boiled for a few minutes and the copper is then filled with water and placed over a light fire for some time, the heat being kept at 120° Fahrenheit, after which it is gradually increased.

Light and Dark Yellow for Wool.—Make bath of weld for light color; boil the weld for ten or fifteen minutes only, but for dark color, two or three hours.

Chocolate on Wool.—Alum and tartar on mordant. A yellow body is first given to the wool by a dye bath of weld, for which purpose the weld should be boiled about twenty minutes. Then add a small quantity of madder and pass the wool through the bath. Afterwards gradually add some bruniture, also some pyrolignite of iron, and if not yellow enough add some strong decoction; should the wool be rendered too red, put it through alum and tartar mordant again and proceed as before with weld and bruniture q. s. About two pounds of madder is sufficient for thirty pounds of wool.

Black on Wool (1).—For twenty pounds of wool use one pound

of tartar and three ounces of sulphate of iron for mordant. Make a bath of logwood and add three ounces of sulphate of copper; to give dark color, add some sumach. The addition of a little weld is also useful.

Black on Wool (2).—Pass the wool through indigo vat and after through bath of cochineal and sulphate of iron or of logwood, galls or sumach.

Deep Gold Brown on Wool.—Alum and tartar mordant. Make bath of weld by boiling for half an hour more and adding gradually q. s. of madder. Use three successive baths of weld.

Mahogany Color on Silk.—First give the body a bath with solution of annatto, according to the tint required; then pass through two baths of weld, finishing with madder and bruniture.

Blue Black on Wool.—Pass the wool through a solution composed of one pound of tar, one pound of sulphate or acetate of iron and five or six ounces verdigris; finish with bath of logwood, sumach and sulphate or acetate of iron.

Turkey Yellow on Wool.—A bath is formed by boiling four bundles of weld, ten or twelve pounds, each in one hundred and fifty gallons of water for about twenty minutes. Through this bath forty-two pounds of wool, previously treated with alum and tartar mordant, are passed three times successively. The last time about two handfuls of madder are gradually added. Two-thirds of the contents of the copper are then thrown away and it is filled up with cold water, to which two and a half pounds of bruniture are added and the wool is passed through it again.

Rose Color on Wool.—Treat sixty pounds of wool with alum and tartar mordant for two hours. Prepare bath with about half a a pound of cochineal and three handfuls of madder previously dissolved in water added gradually. Expose the wool to the air; then empty the bath and start a fresh one; add gradually more solution of cochineal and tartar to obtain the required shades. About two pounds of cochineal are sufficient for sixty pounds of wool. A small quantity of the tin solution may be added if necessary.

Lilac on Wool.—Treat with alum and tartar mordant for about half an hour; take out skeins for lighter shades first. Dissolve about one ounce of ammoniated cochineal in three pints of hot water in a tin vessel; in another tin, which holds four or five gallons, put two gallons of water, and about one gallon of alum and water with a small additional quantity of alum and tartar. If it should have a dark appearance, throw away one-third and fill up with cold water and the ammoniated cochineal gradually, and pass all the skeins of wool through the bath; all the while over the fire, the temperature being at first 130° Fahr., and gradually increased. Add some ammoniated cochineal to a fresh bath of necessary, and give also a weak bath of archil. Then into a vessel of cold water put a bowl of warm indigo vat liquor and give the wool the desired shades by passing it through the blue solution. For dark lilac the wool may be put through the indigo vat. The wool should be wrung out and dried quickly.

Green on Wool.—Place twenty pounds of wool in a vessel containing one hundred gallons of boiling water; then add four pounds of dissolved soda crystals and let the wool remain about half an hour. Next, wash the wool in water and expose it to the air. Apply alum and tartar mordant. Put about three large handfuls of yellow wool (*bois jaune*) in two or three gallons of water and boil and keep hot for two hours. Put half a pound of carmine indigo into a gallon of water. Mix the decoction of *bois jaune* with the indigo solution in the bath in proportion, according to the shade of green required. If any of the skeins take the shade unevenly, pass them through the above soda bath, which will remove the blue; then mordant again with alum and tartar and proceed as before. Add some alum to the bath before using it for green, and also occasionally in the course of the dyeing.

Dark Green.—Use strong decoction of *bois jaune* or preferably red fustic with solution of carmine of indigo and a little dissolved indigo, according to the tint required. Alum also is to be added. Full very dark green pass through the indigo vat.

Dutch Black on Silk.—Pass the silk through a bath of galls and sumach, in the proportion of about half a pound of galls to three pounds of sumach for each pound of silk. Then pass the silk through a bath of sulphate of iron and afterwards a solution of Prussian blue in muriatic acid; then pass through fulling mill with fullers' earth. Bag the silk.

Green Gray on Wool.—Pass the wool through a weak bath of weld and madder, to give various gradations of straw color. Dark shades first; others progressively put into the bath; then add more decoction of weld and madder, as may be deemed necessary; finish with pyrolignite of iron.

Lilac to Plum Color on Wool—Bath of cochineal; afterwards pass through hot water. Wool takes the indigo vat often better than cochineal alone, and more evenly.

Rose on Silk or Wool.—Use bath of red sandal-wood with mordant of muriate of tin.

Purplish Blue.—Mordant of alum and solution of tin. Afterwards bath of logwood or Brazil wood.

Claret Color on Wool.—Alum and tartar mordant and bath of cochineal, madder and weld.

Fine Black for Silk.—Extract of chestnut with tartar and sulphate of iron.

Light Yellow on Wool.—Boil one bundle of weld for each thirty pounds of wool for from ten to fifteen minutes.

Brown on Wool.—Decoction of walnut peel with madder and pyrolignite of iron or bruniture.

Deep Yellow on Wool.—First give bath of weld, then madder and finish with bruniture.

Gobelins Purple on Wool.—Bath of cochineal and indigo vat. Alum and tartar mordant.

Yellow on Silk.—First solution of annatto, then alum mordant, and finish with bath of weld.

Green on Silk.—Mixture of solution of indigo with carmine or of indigo with turmeric.

Olive on Silk.—Pass through indigo vat, after which dip three times in bath of weld.

Flesh Color on Silk or Wool.—Bath of cochineal madder and red fustic.

Yellow Olive on Wool or Silk.—Bath of weld and bruniture with addition of madder for deepest shades.

Green Primrose.—Bath of weld and indigo vat for lighter colors; add pyrolignite of iron or bruniture for darker colors.

Green for Silk.—Bath of weld and indigo vat.

Dust Gray (*Gris de Perle*).—Bath of cochineal, weld and bruniture.

Silver Gray.—Bath of cochineal, madder and bruniture.

Orange Gold.—Bath of cochineal and madder with solution of tin and fustic.

OUR FULL PAGE ILLUSTRATIONS.

FURNITURE IN THE DARK CONTINENT.

MUCH that is quaint and primitive is to be seen at the Stanley and African Exhibition, now being held at the Victory Gallery, in Regent street, London. The exhibits may be said to illustrate to a certain extent the arts and industries of the dark Continent, as will be seen from the accompanying sketches, which represent some of those exhibits which are likely to prove of most interest to our readers. (See page 134.)

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STUDY OF HONEYSUCKLE.

By Charlotte A. Morton.

THIS flower lends itself very gracefully to decoration of many kinds. The variety of coloring in the flowers renders it particularly pleasing. The dark green of the leaves contrasts well with the pale pinks and buffs of the flower.

When the flowers first bloom they are a pale pink with deeper pink on the outside of the calyx, as they grow older the flower deepens to a strong buff, losing the outer pink. The leaves are a dark green and rather lustrous, a paler green on the under side of the foliage sets of the darker color. (See page 129.)

THE woodwork of the furniture in a bedroom is painted in yellows and grays, and these are placed against a paper of a greenish hue, the coloring being further aided by the Madras muslin curtains which adorn the pretty bed.

IN another bedroom there is an old gold dado and a gilded frieze, the wall filling between being an old gold flock. The furniture is oak, stained two shades of olive green, and enriched with walnut mouldings.

WALNUT furniture in a parlor looks best on a fine pile carpet in tones of yellow, ecru, or old gold. The walls' background should have a cream and yellowish paper.

THE fashion of decorating the walls of apartments entirely with textile fabrics is becoming more common than is generally supposed. Here is an idea that has been actually carried out. Above a dado of maroon plush, there is a filling of old gold and greenish gray silk which possesses a very pretty "bloom." The frieze is a figured bluish velvet. The wall has a tent-like ceiling cleverly made up in light tones of Madras muslin. The woodwork of this room is in American walnut, the mantelpiece being a very artistic elaboration of carving and mouldings in modern Renaissance. Such a room represents the acme of luxury.